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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,293	04/08/2004	Teruaki Kasai	36635	8619
116	7590	09/20/2006	EXAMINER	
PEARNE & GORDON LLP 1801 EAST 9TH STREET SUITE 1200 CLEVELAND, OH 44114-3108			OSELE, MARK A	
			ART UNIT	PAPER NUMBER
			1734	

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/820,293

Applicant(s)

KASAI, TERUAKI

Examiner

Mark A. Osele

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 2 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3,5 and 6 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 04082004, 09172004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 1-2 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 30, 2006.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 3, 5, and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 7,060,593 (Kurosawa et al. '593). It is noted that the U.S. Patent Publication 2003/0060021 (Kurosawa et al. '021) has the same disclosure as 7,060,593 and is prior art under 35 U.S.C. 102(a). For purposes of clarity, the citations to Kurosawa et al. will be to the U.S. Patent (Kurosawa et al. '593).

Kurosawa et al. shows a method and apparatus for removing semiconductor dies from an adhesive sheet comprising, in order: bringing suction members, 44-1, 44-2, 44-

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3...44-7, into contact with the lower surface, 42-2, of the sheet, 41, and sucking the sheet so that the deformation of the chip, 1, held on the sheet is reformed; recognizing the chip by capturing an image of the chip held on the sheet with a camera, 4; positioning the chip to be picked up relatively to the pick-up head, 10, on the basis of the recognition result; separating the sheet from the chip by sucking the sheet from sucking grooves with boundary zones, 45, kept in contact with a lower surface of the sheet; and a holding step of holding an upper surface of the chip separated from the sheet using the pick-up head (Figs. 45, 46A, 46B, 46C, 47A, 47B; column 17, line 22 to column 18, line 29, column 18, lines 38-57).

4. Claims 3, 5, 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Publication 10-163133 (Seiichi). Seiichi shows a method and apparatus for removing semiconductor dies from an adhesive sheet comprising, in order: bringing suction members, 102, into contact with the lower surface of the sheet, 106, and sucking the sheet so that the deformation of the chip, 105, held on the sheet is reformed; recognizing the chip by capturing an image of the chip held on the sheet with a camera, 111; positioning the chip to be picked up relatively to the pick-up head, 110, on the basis of the recognition result; separating the sheet from the chip by sucking the sheet from sucking grooves, 4, with boundary zones, 103, kept in contact with a lower surface of the sheet; and a holding step of holding an upper surface of the chip separated from the sheet using the pick-up head (Figs. 9A, 9B, 10A, 10B, English Abstract).

***Allowable Subject Matter***

5. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art suggests a separating step wherein suction members are moved away from the rear surface of the sheet while boundary zones between the suction grooves remain in contact with the sheet.

***Drawings***

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "22a" has been used to designate both the adhesive sheet (Fig. 3) and the suction plane (Fig. 4b, 6b). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

8. The disclosure is objected to because of the following informalities: Paragraph 0027, the coupling member is given element number 25 and 25a; Paragraph 0031 refers to Fig. 4 but does not indicate whether this is Fig. 4A or Fig. 4B.

Appropriate correction is required.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Davis et al., Summers, and Cheung et al. each show lifting chips from tape held by suction. Kurosawa '543 and Takyu et al. each show chips on adhesive tape deformed by suction on the tape.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Osele whose telephone number is 571-272-1235. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on 571-272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**MARK A. OSELE**  
**PRIMARY EXAMINER**

September 15, 2006